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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,454	03/17/2004	Hajime Nishimura	16869P-108300US	5440

20350 7590 01/17/2008
TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

BIBBINS, LATANYA

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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01/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/803,454

Applicant(s)

NISHIMURA ET AL.

Examiner

LaTanya Bibbins

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the remarks filed on November 7, 2007, Applicant amended claims 1 and 6, and submitted arguments for allowability of pending claims 1-10.

Response to Arguments

2. Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new grounds of rejection.
3. Applicant's arguments, with respect to claims 6-10, have been fully considered but they are not persuasive.

Applicant argues that "claim 6, as amended, recites features that are similar to the features recited in amended claim 1" and that claim 6 is allowable over the cited art for at least the same reasons as discussed with reference to claim 1.

However, amended claim 6 recites a key feature that is not recited in amended claim 1 and is in direct contrast to Applicants arguments. More specifically, amended claim 6 recites "controlling drive current to the semiconductor laser based on the detected temperature" which is not only contrary to Applicant's argument that "it is possible to control current supplied to a laser in a pickup and to control the rotational speed of the motor based solely on the data recording properties" but also contrary to the amended claim limitation of "continuously executing a recording operation on the optical disc ***without regard to the temperature of the interior of the pickup detected by the temperature sensor.***" It is not possible to "continuously execute a recording operation on the optical disc without regard to the temperature of the interior of the

pickup" as claimed and as argued by Applicant since the drive current of the semiconductor laser, which is used to provide a laser beam for recording data on the optical disc, is based on the detected temperature.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.**

Regarding claims 1 and 6, the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. New or amended claims which introduce elements or limitations which are not supported by the as-filed disclosure violate the written description requirement. See MPEP § 2163 I(B).

In the amendment filed November 7, 2007, claims 1 and 6 were amended to include the limitation "thereby continuously executing a recording operation on the optical disc ***without regard to the temperature of the interior of the pickup detected by the temperature sensor.***" However, the specification does not disclose continuously executing recording ***without regard to the temperature of the interior of the pickup detected by the temperature sensor.*** Instead, the specification discloses

"restricting the drive current supplied to the laser diode in accordance with a detected temperature" (Abstract), controlling the drive current of the semiconductor laser "in accordance with the detected temperature" (paragraph [0014]), setting the data recording speed "in accordance with this measured temperature sensor value" (Figure 1 and paragraph [0041]), and "better optimization of control of the data recording speed with respect to the ambient temperature can be achieved" (paragraph [0048]).

Therefore, the claimed limitation "" of amended claims 1 and 6 is not supported by the as-filed disclosure, and the written description requirement is violated.

Dependent claims 2-5 and 7-10, do not resolve the 35 U.S.C. 112 first paragraph issues of independent claims 1 and 6 recited above and are therefore rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima et al. (US PGPub Number 2002/0006084 A1) in view of Shumura et al. (US Patent Number 6,738,330 B2).**

Regarding claim 1, Kawashima discloses an optical disc device comprising: a pickup having a semiconductor laser for providing a laser beam for recording of data on

an optical disc (Figure 14 element 24 and the discussion in paragraph [0101]; a motor coupled to rotate the optical disc (Figure 14 element 21 and the discussion in paragraph [0099]); a movement mechanism configured to move the pickup in a radial direction of the optical disc (Figure 14 element 25 and the discussion in paragraph [0102]); a system controller configured to control the pickup by supplying drive current to the semiconductor laser and to control a rotational speed of the optical disc (Figure 14 elements 23 and 27 and the discussion in paragraphs [0067]-[0071], and [0111]); and wherein the system controller: determines data recording properties of the optical disc (see the discussion in paragraphs [0067]-[0071]), controls the drive current supplied to the semiconductor laser based on the data recording properties of the optical disc determined by the system controller (see the discussion in paragraphs [0067]-[0071], and [0111]) and controls the rotational speed of the motor based on the data recording properties of the optical disc determined by the system controller (see the discussion in paragraphs [0067]-[0071], and [0111]), thereby continuously executing a recording operation on the optical disc without regard to the temperature of the interior of the pickup detected by the temperature sensor (see the discussion in paragraphs [0067]-[0071], and [0111]).

Kawashima, however, fails to disclose, while Shumura discloses a temperature sensor configured to detect temperature of an interior of the pickup (Figure 1 element 14 and the discussion in column 4 lines 17-22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the temperature sensor of Shumura into the

optical disc device of Kawashima. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to monitor the temperature inside the information reproducing and recording apparatus while operating in an information reproducing mode (as disclosed by Shumura in the abstract and in column 4 line 63 - column 6 line 36).

Regarding claim 2, Kawashima further discloses wherein the system controller determines the data recording properties of the optical disc based on information recorded in an inner circumferential section of the optical disc (see paragraphs [0053], [0067], and [0068]).

Regarding claim 3, Shumura further discloses the optical disc device wherein the system controller comprises a table for setting a data recording speed for the optical disc, the table containing the detected temperature and the data recording properties of the disc as parameters (see the description of the ROM table in column 4 lines 6-8 and column 7 lines 6-10).

Regarding claim 5, Kawashima further discloses wherein the data recording properties of the optical disc include at least one of the type of the optical disc, information regarding the manufacturer of the optical disc, information regarding the laser power needed for recording, and information regarding the rotational speed of the optical disc (see the discussion in paragraphs [0067]-[0070]).

Regarding claim 6, Kawashima discloses a method of recording data on an optical disc, the method comprising: rotating an optical disc (see the discussion in paragraphs [0099] and [0100]); recording data by directing a laser beam onto the optical

disc (see the discussion in paragraphs [0103] and [0104]); determining data recording properties of the optical disc (see the discussion in paragraphs [0067]-[0071]); setting the rotational speed of the optical disc based on the determined data recording properties of the optical disc (see the discussion in paragraphs [0067]-[0071], and [0111]); and continuously executing a recording operation on the optical disc without regard to the temperature of the interior of the pickup detected by the temperature sensor (see the discussion in paragraphs [0067]-[0071], and [0111]).

Kawashima, however, fails to disclose, while Shumura discloses detecting temperature of an interior region of a pickup having a semiconductor laser providing a laser beam for recording data on the optical disc (Figure 1 element 14 and the discussion in column 4 lines 17-22); and controlling drive current to the semiconductor laser based on the detected temperature (column 6 lines 55-62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the temperature sensor of Shumura into the recording method of Kawashima. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to properly control the start of the reproducing and recording operation (as disclosed by Shumura in the abstract).

Regarding claim 7, Kawashima further discloses wherein the data recording properties of the optical disc are determined based on information recorded in an inner circumferential section of the optical disc (see paragraphs [0053], [0067], and [0068]).

Regarding claim 8, Shumura further discloses setting of the rotational speed of the optical disc is performed prior to executing the recording operation on the optical disc (see column 6 lines 43-64 where the recording starts, the disc begins to rotate, and then information is recorded when laser beams irradiate the surface of the disc).

Regarding claim 9, Shumura further discloses setting of the rotational speed of the optical disc is performed after executing the recording operation on the optical disc (see column 7 lines 20-26 where the recording operation is stopped, the rotation speed equals zero, when the temperature exceeds a range and after recording was already performed).

Regarding claim 10, Kawashima further discloses wherein the data recording properties of the optical disc include at least one of the type of the optical disc, information regarding the manufacturer of the optical disc, information regarding the laser power needed for recording, and information regarding the rotational speed of the optical disc (see the discussion in paragraphs [0067]-[0070]).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima et al. (US PGPub Number 2002/0006084 A1) in view of Shumura et al. (US Patent Number 6,738,330 B2), as applied to claim 1 above, and further in view of Sugita et al. (US Patent Number 5,311,494).

Regarding claim 4, the combination of Kawashima and Shumura disclose the optical disc device according to claim 1, but fail to disclose the dimensions of the optical disc device. Sugita, however, teaches an optical disk apparatus wherein the dimension

of the optical disc device in the thickness direction thereof is no more than 10 mm (see column 21 line 68 and column 22 lines 1 and 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical disc device of Kawashima and Shumura to have a thickness in accordance with the optical disk apparatus of Sugita. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings so that "the optical disc apparatus can be used in lap-top type or notebook-type personal computers and workstations" (Sugita column 22 lines 3-5).

Citation of Relevant Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto (US Patent Number 6,229,275 B1) discloses a semiconductor integrated circuit device for use in a disk drive has a temperature detection section that detects the temperature inside the semiconductor integrated circuit device to switch a signal TSD between high and low levels when a predetermined temperature is reached, and a delay circuit that receives this signal TSD and a clock from a control section to output signals TSD1 and TSD2. In this semiconductor integrated circuit device, when the temperature inside rises above T^+ , a spindle motor driver section is deactivated, and, a predetermined length of time thereafter, a stepping motor driver section is deactivated; when the temperature inside drops below T^- , the stepping motor driver

section is activated, and, a predetermined length of time thereafter, the spindle motor driver section is deactivated.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

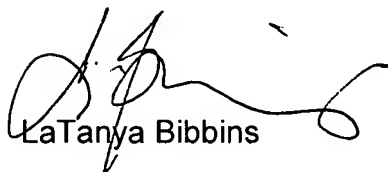
Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

Application/Control Number:
10/803,454
Art Unit: 2627

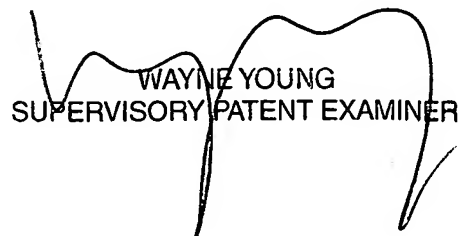
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LaTanya Bibbins



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER